APPENDIX A

PROPOSED RULES

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR parts 2 and 25 as follows:

PART 2 -- FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

1. The authority citation for Part 2 continues to read as follows:

Authority: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

2. Section 2.1 is amended by adding a definition in alphabetical order:

§ 2.1 Terms and definitions.

* * * * *

(c) * * *

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Baseline. The line from which maritime zones are measured, also known as the coast line. The baseline is a combination of the low-water line and closing lines across the mouths of inland water bodies and is adjusted from time-to-time by the U.S. Department of State's Baseline Committee.

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3. Section 2.106, the Table of Frequency Allocations, is amended as follows:

a. Revise pages 55, 57, 64, and 66.

b. In the list of United States (US) footnotes, add USxxx.

c. In the list of non-Federal Government (NG) footnotes, add footnotes NGxxx and NGyyy.

§ 2.106 Table of Frequency Allocations.

The revisions and additions read as follows:

* * * * *

3700-5650 MHz (SHF)					
International Table			United States Table		FCC Rule Part(s)
Region 1	Region 2	Region 3	Federal Government	Non-Federal Government	
See previous page for 3600-4200 MHz	3700-4200 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE except aeronautical mobile		3700-4200	3700-4200 FIXED NG41 FIXED-SATELLITE (space-to-Earth) NGxxx	International Fixed (23) Satellite Communications (25) Fixed Microwave (101)
4200-4400 AERONAUTICAL RADIONAVIGATION 5.438 5.437 5.439 5.440			4200-4400 AERONAUTICAL RADIONAVIGATION 5.440 US261		Aviation (87)
4400-4500 FIXED MOBILE			4400-4500 FIXED MOBILE	4400-4500	
4500-4800 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 MOBILE			4500-4800 FIXED MOBILE US245	4500-4800 FIXED-SATELLITE (space-to-Earth) 5.441 US245	
4800-4990 FIXED MOBILE 5.442 Radio astronomy			4800-4940 FIXED MOBILE US203 US342	4800-4940 US203 US342	
			4940-4990	4940-4990 FIXED MOBILE except aeronautical mobile	Private Land Mobile (90) Fixed Microwave (101)
5.149 5.339 5.443			5.339 US311 US342 G122	5.339 US311 US342	
4990-5000 FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY Space research (passive) 5.149			4990-5000 RADIO ASTRONOMY US74 Space research (passive) US246		
5000-5150 AERONAUTICAL RADIONAVIGATION 5.367 5.443A 5.443B 5.444 5.444A			5000-5250 AERONAUTICAL RADIO-NAVIGATION US260	5000-5150 AERONAUTICAL RADIO-NAVIGATION US260 5.367 5.444A US211 US344 US370	Satellite Communications (25) Aviation (87)

5570-7250 MHz (SHF)					
International Table			United States Table		FCC Rule Part(s)
Region 1	Region 2	Region 3	Federal Government	Non-Federal Government	
5570-5650 MARITIME RADIONAVIGATION MOBILE except aeronautical mobile 5.446A 5.450A RADIOLOCATION 5.450B 5.450 5.451 5.452			5570-5600 MARITIME RADIONAVIGATION US65 RADIOLOCATION G56 US50 G131 5600-5650 MARITIME RADIONAVIGATION US65 METEOROLOGICAL AIDS RADIOLOCATION US51 G56 5.452 G131	5570-5600 MARITIME RADIONAVIGATION US65 RADIOLOCATION US50 5600-5650 MARITIME RADIONAVIGATION US65 METEOROLOGICAL AIDS RADIOLOCATION US51 5.452	RF Devices (15) Maritime (80) Private Land Mobile (90)
5650-5725 RADIOLOCATION MOBILE except aeronautical mobile 5.446A 5.450A Amateur Space research (deep space) 5.282 5.451 5.453 5.454 5.455			5650-5925 RADIOLOCATION G2	5650-5830 Amateur 5.150 5.282	RF Devices (15) ISM Equipment (18) Amateur (97)
5725-5830 FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur 5.150 5.451 5.453 5.455 5.456	5725-5830 RADIOLOCATION Amateur 5.150 5.453 5.455				
5830-5850 FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur Amateur-satellite (space-to-Earth) 5.150 5.451 5.453 5.455 5.456	5830-5850 RADIOLOCATION Amateur Amateur-satellite (space-to-Earth) 5.150 5.453 5.455			5830-5850 Amateur Amateur-satellite (space-to-Earth) 5.150	ISM Equipment (18) Amateur (97)
5850-5925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.150	5850-5925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Amateur Radiolocation 5.150	5850-5925 FIXED FIXED-SATELLITE (Earth-to-space) MOBILE Radiolocation 5.150	5.150 US245	5850-5925 FIXED-SATELLITE (Earth-to-space) US245 MOBILE NG160 Amateur 5.150	ISM Equipment (18) Private Land Mobile (90) Amateur (97)

5925-6700 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B MOBILE			5925-6425	5925-6425 FIXED NG41 FIXED-SATELLITE (Earth-to-space) NGxxx	International Fixed (23) Satellite Commun. (25) Fixed Microwave (101)

10.7-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 5.484A (Earth-to-space) 5.484 MOBILE except aeronautical mobile	10.7-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 5.484A MOBILE except aeronautical mobile		10.7-11.7 US211	10.7-11.7 FIXED FIXED-SATELLITE (space-to-Earth) 5.441 US211 NG104 US355	Satellite Communications (25) Fixed Microwave (101)
11.7-12.5 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE	11.7-12.1 FIXED 5.486 FIXED-SATELLITE (space-to-Earth) 5.484A Mobile except aeronautical mobile 5.485 5.488	11.7-12.2 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE	11.7-12.2 5.486	11.7-12.2 FIXED-SATELLITE (space-to-Earth) NG143 NG145 NGyyy Mobile except aeronautical mobile	
	12.1-12.2 FIXED-SATELLITE (space-to-Earth) 5.484A 5.485 5.488 5.489		12.1-12.2 5.487 5.487A 5.492	 5.486 5.488	
5.487 5.487A 5.492	12.2-12.7 FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE	12.2-12.5 FIXED MOBILE except aeronautical mobile BROADCASTING 5.484A 5.487 5.491	12.2-12.7	12.2-12.7 FIXED BROADCASTING-SATELLITE	
12.5-12.75 FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space)		12.5-12.75 FIXED FIXED-SATELLITE (space-to-Earth) 5.484A			
5.494 5.495 5.496	5.487A 5.488 5.490 5.492 See next page for 12.7-12.75 GHz	MOBILE except aeronautical mobile BROADCASTING-SATELLITE 5.493	5.490 See next page for 12.7-12.75 GHz	5.487A 5.488 5.490	See next page for 12.7-12.75 GHz

14-14.25 FIXED-SATELLITE (Earth-to-space) 5.484A 5.506 5.457A 5.506B 5.457B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.504C 5.506A Space research 5.504A 5.505			14-14.2 RADIONAVIGATION US292 Space research USxxx	14-14.2 FIXED-SATELLITE (Earth-to-space) NGyyy RADIONAVIGATION US292 Mobile-satellite (Earth-to-space) Space research USxxx	Satellite Communications (25) Maritime (80) Aviation (87)
14.25-14.3 FIXED-SATELLITE (Earth-to-space) 5.484A 5.506 5.457A 5.457B 5.506B RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.506A 5.508A Space research 5.504A 5.505 5.508 5.509			14.2-14.4	14.2-14.4 FIXED-SATELLITE (Earth-to-space) NGyyy Mobile-satellite (Earth-to-space) Mobile except aeronautical Mobile	Satellite Communications (25) Fixed Microwave (101)
14.3-14.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.484A 5.506 5.506B 5.457A 5.457B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.506A 5.509A Radionavigation-satellite 5.504A	14.3-14.4 FIXED-SATELLITE (Earth-to-space) 5.484A 5.506 5.457A 5.506B Mobile-satellite (Earth-to-space) 5.506A Radionavigation-satellite 5.504A	14.3-14.4 FIXED FIXED-SATELLITE (Earth-to-space) 5.484A 5.506 5.457A 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.506A 5.509A Radionavigation-satellite 5.504A			
14.4-14.47 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.506A 5.509A Space research (space-to-Earth) 5.504A			14.4-14.47 Fixed Mobile	14.4-14.47 FIXED-SATELLITE (Earth-to-space) NGyyy Mobile-satellite (Earth-to-space) USxxx	Satellite Communications (25)
14.47-14.5 FIXED FIXED-SATELLITE (Earth-to-space) 5.457A 5.457B 5.484A 5.506 5.506B MOBILE except aeronautical mobile Mobile-satellite (Earth-to-space) 5.504B 5.506A 5.509A Radio astronomy 5.149 5.504A			14.47-14.5 Fixed Mobile US203 US342 USxxx	14.47-14.5 FIXED-SATELLITE (Earth-to-space) NGyyy Mobile-satellite (Earth-to-space) US203 US342 USxxx	

* * * * *

UNITED STATES (US) FOOTNOTES

* * * * *

USxxx Earth stations on vessels operating in the band 14-14.5 GHz shall not cause harmful interference to Federal Government stations of the space research service in the band 14-14.2 GHz nor to stations of the radio astronomy service in the band 14.47-14.5 GHz.

NON-FEDERAL GOVERNMENT (NG) FOOTNOTES

* * * * *

NGxxx In the bands 3700-4200 MHz (space-to-Earth) and 5925-6425 MHz (Earth-to-space), earth stations on board vessels (ESVs) may communicate with space stations of the fixed-satellite service on the condition that such use not cause harmful interference to, claim protection from, or otherwise impose constraints on the operation or development of fixed stations that operate in these bands. ESVs shall take all practical steps to comply with ITU Resolution 902 (WRC-03).

NGyyy In the bands 11.7-12.2 GHz (space-to-Earth) and 14.0-14.5 GHz (Earth-to-space), earth stations on board vessels (ESVs) may communicate with space stations of the fixed-satellite service on a primary basis. ESVs shall take all practical steps to comply with ITU Resolution 902 (WRC-03).

PART 25--SATELLITE COMMUNICATIONS

1. The authority citation for Part 25 continues to read as follows:

AUTHORITY: 47 U.S.C. 701-744. Interprets or applies sec. 303, 47 U.S.C. 303. 47 U.S.C. Sections 154, 301, 302, 303, 307, 309 and 332, unless otherwise noted.

2. Section 25.103 is amended to read as follows:

§25.103 Definitions

* * * * *

(g) *Earth stations on board vessels (ESVs).* An earth station located on board a vessel operating in certain bands of the fixed-satellite service, as distinct from a ship earth station, and intended to be used while in motion or during halts at unspecified points.

3. Section 25.115 is amended to read as follows:

§25.115 Application for earth station authorizations.

* * * * *

(c)(3)Satellite earth station on board vessels (ESVs) or hub station applications for ESV networks operating in the 11.7-12.2 GHz/14.0-14.5 GHz (12/14 GHz or Ku-band).

(i)Applications to license networks of ESVs or hub earth stations for a network of ESVs operating in the 14.0-14.5 GHz frequency band under blanket operating authority shall be filed electronically on FCC Form 312, Main Form and Schedule B, for each large (5 meters or larger) hub station, and Schedule B for each representative type of small antenna (less than 5 meters) operating within the network.

(ii) The initial lead application shall provide a detailed overview of the complete network and fully identify the scope and nature of the service to be provided. The complete technical details of each representative type of small antenna shall also be provided. The lead application for a Ku-band ESV system must identify:

(A) the number of ESVs associated with the network;

(B) the operational area(s) where the proposed ESVs will operate. The description of the operational area should include a detailed description of any area within 125 km of the United States baseline, and in particular including ports and harbors where any ESV associated with the network may operate while in motion, halted for some unspecified time, moored or anchored, and all shipping channels and sea lanes where any ESV associated with the network may operate while in motion or halted for some unspecified time;

(C) each licensee shall annually provide the Commission an updated list of all ports, harbors, shipping channels and sea lanes where any ESV associated with the network may operate;

(D) the ESV system's means of identification and location and method for maintaining a real-time secure database containing this information; and automatic mechanisms to terminate transmissions whenever the station operates outside of its authorized geographic area or operational limits; and a telephone number for the ESV operator point of contact to whom interference claims can be made 24-hours-a-day, seven-days-a-week;

(E) the ESV system's means to verify ESV performance and to terminate ESV transmissions immediately;

(F) the minimum antenna diameter (m);

(G) the pointing accuracy of the ESV antenna in degrees;

(H) the ESV transmitted power spectral density at the input to the antenna (dBw/40kHz);

(I) demonstration of compliance with §25.209 and §25.132

(c)(4) Satellite earth stations on board vessels (ESVs) or hub station applications for ESV networks operating in the 3700-4200 MHz/5925-6425 MHz (4/6 GHz or C-band).

(i) Applications to license networks of ESVs or hub earth stations for a network of ESVs operating in 4/6 GHz band shall be filed electronically on FCC Form 312, Main Form and Schedule B, for each large hub station.

(ii) The initial lead application shall provide a detailed overview of the complete network and fully identify the scope and nature of the service to be provided. The lead application shall also provide an accurate list of the vessels the ESVs are located on, the frequency, bandwidth, and satellites that the ESVs are using, and an itinerary for each vessel from which the ESVs will be operating. The lead application shall also identify whether the services to be provided will be on a coordinated or non-coordinated basis. The complete technical details of each representative type of small antenna shall also be provided. The lead application for a C-band ESV system must identify:

(A) the number of ESVs associated with the network;

(B) the gross tonnage of each class of ship equipped with ESVs operating within the network;

(C) the ESV system's means of identification and location and, for non-coordinated ESV operations, method for maintaining a real-time secure database containing this information which can be accessed by FS operators, and automatic mechanisms to terminate transmissions whenever the station operates outside of its authorized geographic area or operational limits;

(D) the ESV system's means to verify ESV performance and to terminate ESV transmissions immediately, and a telephone number for the ESV operator point of contact to whom such request can be made 24-hours-a-day, seven-days-a-week;

(E) the antenna diameter (m);

(F) the pointing accuracy of the ESV antenna (°);

(G) the ESV transmitted power spectral density at the input to the antenna (dBw/40kHz);

(H) demonstration of compliance with §25.209 and §25.132

(I) the operational area(s) where the proposed ESVs will operate. The description of the operational area should include a detailed description of any area within 300 km of the United States baseline, and in particular including ports and harbors where any ESV associated with the network may operate while in motion, halted for some unspecified time, moored or anchored, and all shipping channels and sea lanes where any ESV associated with the network may operate while in motion or halted for some unspecified time, and where coordination between an ESV-equipped vessel operating in the 4/6 GHz frequency and terrestrial microwave services, may be required;

(J) each licensee shall annually provide the Commission an updated list of all ports, harbors, shipping channels and sea lanes where any ESV associated with the network may operate;

(K) Where ESV coordination in the 4/6 GHz band is required:

(i) The initial lead application shall demonstrate that frequency coordination of each operational area (ports and sea lanes) has been completed prior to filing the application. The coordination must be conducted in accordance with Sections 25.130 and 25.203 of this Part.

(ii) Each licensee shall annually provide the Commission an updated list of all operational areas where coordinated operations are taking place as of the date of the report. The annual list shall also identify the satellites providing service to the network as of the date of the report.

(iii) Each hub earth station application must indicate which satellite transponders (*i.e.* frequency range) it will use to provide service to ESVs. The amount of frequency bandwidth available to any ESV network operator is limited to a maximum of 36 megahertz of spectrum in each direction of transmission for each of two satellites per geographic location (*i.e.* port or harbor). The same 36 megahertz of uplink and 36 megahertz of downlink spectrum for each satellite may be accessed by all ESVs in the network. The 36 megahertz of uplink and 36 megahertz downlink of spectrum need not be the same at each satellite location.

4. Section 25.121 is amended to read as follows:

§25.121 License terms and renewals.

(a) License Term. Except for licenses for DBS facilities and non-coordinated ESV operations in the C-band, licenses for facilities governed by this part will be issued for a period of 15 years.

5. Section 25.134 is amended to read as follows:

§25.134 Licensing provisions of Very Small Aperture Terminal (VSAT), C-band Small Aperture Terminal (CSAT), and Satellite Earth Stations on Board Vessels (ESV) networks.

* * * * *

(a)(3) *ESV networks operating in the 12/14 GHz frequency band.* Applications for ESV networks in the Ku-bands that meet the requirements of Section 25.134 (a)(1), that employ antennas that are 1.2 meters or larger in diameter, and have ESV antenna pointing accuracies of +/-0.2 degrees or better will be routinely processed. The use of smaller antennas or non-consistent power levels will require the filing of an initial lead application (§25.115(c)(4)) that includes all technical analyses required to demonstrate that unacceptable interference will not be caused to any affected adjacent satellite operators by the operation

of the non-conforming earth station as described in 25.134(b) for VSATs. The licenses shall be issued for ESV operations within 125 km of the United States coastline. The hub earth station licensee shall be responsible for all ESV compliance in its network including foreign-flagged ships.

(a)(4) *ESV networks operating in the 4/6 GHz frequency band.* All ESV network applications or applications for hub earth station operations will be routinely processed provided the network employs antennas on board ships with a minimum of 300 gross tonnage that are 4.5 meters or larger in diameter, that are consistent with §25.209, that the antennas would operate with power levels that are consistent with §§25.211(d) and 25.212(d), that the antennas would have pointing accuracies of +/-0.2 degrees or better, and where frequency coordination, if necessary, has been satisfactorily completed. The use of smaller antennas or other power levels requires the filing of an initial lead application (§25.115(c)(4)) that includes all technical analyses required to demonstrate that unacceptable interference will not be caused to any all affected adjacent satellite operators by the operation of the non-conforming earth station. The hub earth station licensee shall be responsible for mitigating any interference arising from ESV operations with its network, regardless of the state of registry of the vessel. ESV licensees will specify that ESV operations shall not cause harmful interference to, claim interference protection from, or otherwise impose constraints on the operations or development of other radio services operating in this frequency band. The licenses shall be issued for ESV operations within 300 km of the United States coastline. For coordinated ESV operations, information about the identification and location of the vessel shall be retained for at least 90 days and be available within 72 hours upon request. Licenses for non-coordinated ESV operations shall be issued for a period of two years.

6. Section 25.202 is amended to read as follows:

§25.202 Frequencies, frequency tolerance and emission limitations

* * * * *

(a)(8) The following frequencies are available for use by ESVs:
3700-4200 MHz space-to-Earth
5925-6425 MHz Earth-to-space
11.7-12.2 GHz space-to-Earth
14.0-14.5 GHz Earth-to-space

7. Section 25.203 is amended to read as follows:

§25.203 Choice of sites and frequencies.

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(l) Applications for coordination of 4/6 GHz band earth stations on board vessels. Prior to the filing of its application, the ESV hub earth station applicant must coordinate the proposed frequency usage of the ESVs within its network with existing terrestrial users and with applicants for terrestrial station authorizations and with previously filed applications in accordance with the coordination procedures set forth in Recommendations ITU-R SF.1649.

APPENDIX B

INITIAL REGULATORY FLEXIBILITY ANALYSIS

As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[177] the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in this Procedures to Govern the Use of Satellite Earth Stations on Board Vessels in Bands Shared with the Terrestrial Fixed Service, Notice of Proposed Rulemaking (Notice).[178] Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Notice provided in paragraph 109 the Notice. The Commission will send a copy of the Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).[179] In addition, the Notice and IRFA (or summaries thereof) will be published in the Federal Register.[180]

A. Need for, and Objectives of, the Proposed Rules

In this Notice the Commission makes proposals and seeks information on measures to provide a level of regulatory certainty to both terrestrial fixed service (FS) and fixed satellite service (FSS) operators. As discussed in greater detail below, the Commission proposes rules and procedures to license earth stations on vessel (ESV) hub stations for operation in both the Ku-band and the C-band in a manner similar to the Commission's current licensing rules for very small aperture terminals (VSATs) that operate in the Ku-band, with appropriate modifications. We propose a minimally intrusive licensing regime for ESVs that would maximize the efficient use of both Ku-band and C-band spectrum while respecting the legitimate expectations of incumbent operators. Establishing a licensing regime for ESVs would also advance the Commission's continuing effort to provide licensees with greater authority to most efficiently use of the spectrum that they occupy.

It is the Commission's view that if adopted, the licensing methodology proposed in the Notice would benefit businesses both large and small by streamlining the process for obtaining authority from the Commission to provide ESV service, which currently must be obtained through special temporary authority for terms of six months. The proposed procedures would provide license terms of from two to fifteen years and would permit parties to seek authorization using simplified procedures. The proposed procedures would also benefit businesses large and

[177] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 – 612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

[178] *See* Procedures to Govern the Use of Satellite Earth Stations on Board Vessels in Bands Shared with the Terrestrial Fixed Service, IB Docket No. 02-10, Notice of Proposed Rulemaking (Notice).

[179] *See* 5 U.S.C. § 603(a).

[180] *See* 5 U.S.C. § 603(a).

small by providing businesses that might be affected by ESV operations with a simple, clear mechanism with minimal administrative burden to resolve any possible claims of harmful interference resulting from those operations.

B. Legal Basis

The Notice is adopted pursuant to Sections 1, 4(i), 4(j), 7(a), 301, 303(c), 303(f), 303(g), 303(r), 303(y), and 308 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 151, 154(i), 154(j), 157(a), 301, 303(c), 303(f), 303(g), 303(r), 303(y), 308.

C. Description and Estimate of the Number of Small entities to Which the Proposals will Apply

The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.[181] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[182] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[183] A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).[184] Below, we further describe and estimate the number of small entity licensees that may be affected by the adopted rules.

Satellite Telecommunications. The SBA has developed a small business size standard for Satellite Telecommunications Carriers, which consists of all such companies having $12.5 million or less in annual receipts.[185] According to Census Bureau data for 1997, there were 324 firms in the category Satellite Telecommunications, total that operated for the entire year.[186] Of this total, 273 firms had annual receipts of $5 million to $9,999,999 and an additional 24 firms had annual receipts of $10 million to $24,999,990.[187] Thus, under this size standard, the majority of firms can be considered small.

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[181] 5 U.S.C. § 603(b)(3).

[182] *Id.* § 601(6).

[183] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after the opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

[184] Small Business Act, 15 U.S.C. § 632 (1996).

[185] 13 C.F.R. § 121.201, NAICS code 517410 (changed from 513340 in October 2002).

[186] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Receipt Size of Firms Subject to Federal Income Tax: 1997," Table 4, NAICS code 517410 (issued Oct. 2000).

Space Stations (Geostationary). Commission records reveal that there are 15 space station licensees. We do not request nor collect annual revenue information, and thus are unable to estimate of the number of geostationary space stations that would constitute a small business under the SBA definition, or apply any rules providing special consideration for Space Station (Geostationary) licensees that are small businesses.

Fixed Satellite Transmit/Receive Earth Stations. Currently there are approximately 3,390 operational fixed-satellite transmit/receive earth stations authorized for use in the C- and Ku-bands. The Commission does not request or collect annual revenue information, and thus is unable to estimate the number of earth stations that would constitute a small business under the SBA definition.

Cellular and Other Wireless Telecommunications. The SBA has developed a small business size standard for Cellular and Other Wireless Telecommunication, which consists of all such firms having 1,500 or fewer employees.[188] According to Census Bureau data for 1997, in this category there was a total of 977 firms that operated for the entire year.[189] Of this total, 965 firms had employment of 999 or fewer employees, and an additional twelve firms had employment of 1,000 employees or more.[190] Thus, under this size standard, the majority of firms can be considered small.

Paging. The SBA has developed small business size standard for Paging, which consists of all such firms having 1,500 or fewer employees.[191] According to Census Bureau data for 1997, in this category there was a total of 1,320 firms that operated for the entire year.[192] Of this total, 1,303 firms had employment of 999 or fewer employees, and an additional seventeen firms had employment of 1,000 employees or more.[193] Thus, under this size standard, the majority of firms can be considered small.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

The proposed rules would, if adopted, require satellite telecommunications operators to

(Continued from previous page)

[187] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4, NAICS code 513340 (issued October 2000).

[188] 13 C.F.R. § 121.201, NAICS code 517212 (changed from 513322 in October 2002).

[189] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 513322 (issued October 2000).

[190] *Id.* The census data do not provide a more precise estimate of the number of firms that have 1,500 or fewer employees; the largest category provided is "Firms with 1,000 employees or more."

[191] 13 C.F.R. § 121.201, NAICS code 517211 (changed from 513321 in October 2002).

[192] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 513321 (issued October 2000).

[193] *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is "Firms with 1,000 employees or more."

establish a database for tracking the location of ESV remote earth stations. The Notice seeks comment on this proposal, including the possible costs associated with the proposal, and seeks comment regarding possible alternatives. The proposed rules, if adopted, would also require ESV operators to maintain a point of contact for resolving possible claims of harmful interference, and seeks comment on this proposal and possible alternatives and the costs of compliance. The Notice also proposes that wireless telecommunications providers nominate a person to serve as a point of contact for such claims of harmful interference. The Commission does not expect significant costs associated with this proposed rule, if adopted.

The Notice seeks comment on possible methods for coordinating ESV operations with FS operations, including questions about the costs of such coordination, and also proposes and seeks comment on an alternative non-coordinated method for licensing. While the Commission does not expect that the cost of compliance with the coordination requirements, if adopted, would be burdensome to small business entities, the proposed alternative non-coordinated licensing approach would also be available to such entities and could help reduce costs to such entities.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

The RFA requires that, to the extent consistent with the objectives of applicable statutes, the analysis shall discuss significant alternatives such as: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage or the rule, or any part thereof, for small entities.[194]

This Notice solicits comment on alternatives for more efficient processing of earth station on vessel (ESV) applications and simplifying ESV procedures, for example, by migrating from six-month special temporary licensing to a licensing method that would provide for licenses with terms from two to fifteen years. The Notice also seeks comment on streamlining the application process for ESV operations by permitting blanket licensing of multiple ESV terminals in a single application. Adoption of some of these proposals would simplify the application process for ESVs and increase the licensing term for ESV operations. Accordingly, the Commission believes that adoption of these proposed rules would benefit all ESV applicants, including small entities, by significantly reducing the cost associated with obtaining and maintaining authority to operate an ESV network.

As described above, the Commission also seeks comment on a number of alternative compliance and coordination processes, including seeking comments on the costs of such compliance. The Commission has taken care to consider the costs on business both large and small and has proposed alternatives to reduce the costs for both satellite and terrestrial operators.

[194] 5 U.S.C. § 603(c)(1)-(c)(4).

Among these alternative is licensing on a non-coordination basis, which if adopted, could serve as a method for reducing costs for small entities by obviating the need to coordinate ESV operations with FS operations.

F. Federal Rules that May Duplicate, Overlap, or Conflict With the Proposed Rules

None.